REMARKS

Claims 1-24 were pending, all of which were rejected. Claim 1 has been amended to make explicit what was already implicit in the claim. The claim scope has not changed and no new matter has been added

Claim Objections

The Examiner correctly noted that the second Claim 23 was misnumbered, which has been renumbered as Claim 24.

Claim Rejections – 35 U.S.C. §103

Claims 1-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rosencwaig et al., (6,267,880) ("Rosencwaig") in view of Spillman, Jr. et al., (4,904,085) ("Spillman").

Independent Claim 1 recites "a spatial variable phase retarder in the path of the electromagnetic beam after the sample". The Examiner cites Rosencwaig as disclosing "a spatial variable phase retarder (98) in the path of the electromagnetic beam after the sample". Rosencwaig, however, does **not** disclose a spatial variable phase retarder. Rosencwaig discloses the use of a "rotating compensator (retarder) 98". Col. 8, lines 15-18. Thus, Rosencwaig requires a moving element in the form of a rotating compensator to produce a relative phase delay that temporally varies as the compensator rotates. See, col. 8, lines 43-45. In comparison, the claimed spatial variable phase retarder varies is a device that spatially varies the phase.

As for the variable retarder (52/60) cited by the Examiner in Spillman, the variable retarder (52/60) is manually adjusted to produce a desired amount of retardation in the optical energy, but it does **not** produce a spatially dependent variation in the phase. Col. 5, lines 14-49. Further, as can be clearly seen in Fig. 1 of Spillman, both the variable retarder (52/60) and beam splitter 100 are before the sensor under test 190 **not** after sample, as recited in Claim 1. Additionally, Spillman does **not** disclose a "polarizing beam splitter" that splits beam "into a first beam having a first polarization state and a second beam having a second polarization state that is orthogonal to the first polarization state" as recited in Claim 1.

The Examiner also cited Rosencwaig as having "a first set of detector (54) elements" and "a second set of detector (56) elements". The detectors cited by the Examiner are not in

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the same optical path as the "electromagnetic source (90)", "electromagnetic beam (106)", and compensator (98)". Rosencwaig teaches that the beam that passes through the compensator 98 is received by a single "detector 104". Fig. 1, col. 9, lines 14-16. The detectors 54/56 in Rosencwaig are part of a beam profile reflectometer (BPR), which is completely separate from the disclosed device that includes the other cited components. Col. 5, lines 33-38. The Examiner has not provided any reason why one of ordinary skill in the art would move the detectors 54/56 to replace the detector 104.

Further, the Examiner is relying on hindsight to provide the motivation to combine Rosencwaig with Spillman. The Examiner stated that "it would have been obvious ... to incorporate the teachings of Rosencwaig in conjunction with Spillman to placed spatial variable phase retarder in front of polarizing beam splitter for the purpose of resolving the beam into two orthogonal polarization components and produce a phase shift between them." This motivation is taken directly from the claim language and is not found explicitly nor implicitly in the cited references or the known prior art. Further, because Spillman does not disclose a "polarizing beam splitter" the motivation of resolving the beam into two orthogonal polarization components is not present in Spillman.

Thus, Applicants respectfully submit that Claim 1 is patentable over the combination of Rosencwaig and Spillman for at least the above reasons. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 2-10 depend from Claim 1 and are, therefore, likewise patentable.

Independent Claim 11 is similar to Claim 1 in that it recites "producing a spatially dependent relative phase difference between the electromagnetic field components of the electromagnetic beam after the beam is incident on the sample;" "splitting the electromagnetic beam after a spatially dependent relative phase difference is produced into two beams having orthogonal polarization states;" and "detecting the intensities of the two beams having orthogonal polarization states at a plurality of positions."

As discussed above, neither Rosencwaig nor Spillman teach or suggest "producing a spatially dependent relative phase difference", "splitting the electromagnetic beam after a spatially dependent relative phase difference is produced into two beams having orthogonal polarization states" or "detecting the intensities of the two beams". Further, other than

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hindsight, there is suggestion or motivation to combine Rosencwaig with Spillman as the Examiner has suggested.

Thus, Applicants respectfully submit that Claim 11 is patentable over the combination of Rosencwaig and Spillman for at least the above reasons. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 12-14 depend from Claim 11 and are, therefore, likewise patentable.

Independent Claim 15 recites in part:

> means for producing a spatially dependent phase shift in the electromagnetic beam after the electromagnetic beam is incident on the sample, the means for producing a spatially dependent phase shift producing a phase shifted beam wherein the phase shift is spatially dependent;
>
> means for splitting the phase shifted beam into a first beam and a second beam, wherein the first beam and second beam are orthogonally polarized;
>
> means for measuring the intensity of the first beam and the second beam, the means for measuring being in the path of the first beam and the second beam; and
>
> means for summing the intensities of the first beam and the second beam.

As discussed above in reference to Claims 1 and 11, neither Rosencwaig nor Spillman teach or suggest "means for producing a spatially dependent phase shift", "means for splitting the phase shifted beam into a first beam and a second beam, wherein the first beam and second beam are orthogonally polarized", or "the means for measuring being in the path of the first beam and the second beam". Moreover, there is no suggestion or motivation to combine Rosencwaig with Spillman.

Further, Claim 15 recites "means for summing the intensities of the first beam and the second beam". In relation to Claims 7 and 8, the Examiner stated that "Rosencwaig discloses wherein a means (66) for summing the intensities of the first beam and the second beam ... (see col. 5, line 56-60)." Applicant points out that Col. 5, lines 56-60 discusses the uses of various modeling algorithms to determine the thickness and refractive index and that there is no discussion of summing the intensities.

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Thus, Applicants respectfully submit that Claim 15 is patentable over the combination of Rosencwaig and Spillman for at least the above reasons. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 16-24 depend from Claim 15 and are, therefore, likewise patentable.

Claim 1 has been amended and Claims 1-24 remain pending. For the above reasons, Applicants respectfully request allowance of Claims 1-24. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (408) 982-8202.

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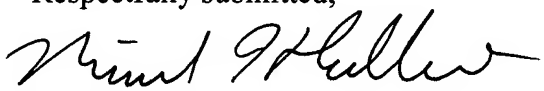
Respectfully submitted,



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